

What is claimed is:

1                   1. An organism-compatible material with combined extracel-  
2 lular matrices comprising a base made of a material for organisms, a cal-  
3 cification layer formed on the base, and extracellular matrices formed on  
4 the layer by cells of a region of an organism to which the organ-  
5 ism-compatible material with combined extracellular matrices is to be ap-  
6 plied

1                   2. An organism-compatible material with combined extracel-  
2 lular matrices as claimed in claim 1 of which the base is of titanium, a  
3 titanium alloy, or a calcium-phosphate compound such as hydroxyapatite,  
4 or a piece of glass, a piece of a polymer or a ceramic overlaid with titanium,  
5 a titanium alloy, or a calcium-phosphate compound such as hydroxyapa-  
6 tite.

1                   Sub A1 > 3. An organism-compatible material with combined extracel-  
2 lular matrices as claimed in claim 1 or 2, wherein said cells are osteoblasts,  
3 chondroblasts, tendon cells, vascular endothelial cells, epithelial cells,  
4 connective tissue cells, or glia cells.

1                   Sub A2 > 4. An organism-compatible material with combined extracel-  
2 lular matrices as claimed in claim 1, 2, or 3 which includes said cells.

1                   5. A production method of an organism-compatible material  
2 with combined extracellular matrices, wherein cells of a region of an or-  
3 ganism, to which the material is to be applied, are cultured on a base  
4 made of titanium or a titanium alloy in a culture solution and, thereby,  
5 extracellular matrices are formed between a calcification layer formed on  
6 the base and the cells.

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6. A production method of an organism-compatible material with combined extracellular matrices, comprising the steps of:

culturing cells of a region of an organism, to which the material is to be applied, on a base made of titanium or a titanium alloy in a culture solution to form extracellular matrices between a calcification layer formed on the base and the cells; and

removing the cells.

Sub A3 7. A production method of an organism-compatible material with combined extracellular matrices as claimed in claim 5 or 6, wherein the base is a piece of glass, a piece of a polymer, or a ceramic overlaid with titanium or a titanium alloy.

1 ~~Sw A4~~ 8. A production method of an organism-compatible material  
2 with combined extracellular matrices as claimed in claim 5, 6, or 7,  
3 wherein a calcification layer is formed on a surface of the base in a culture  
4 solution in advance.

9. A production method of an organism-compatible material with combined extracellular matrices comprising the steps of:

- culturing cells of a region of an organism, to which the material is to be applied, on a base of titanium or a titanium alloy in a culture solution to form extracellular matrices between a calcification layer formed on the base and the cells;
- removing the cells;
- decalcifying the base with the calcification layer and the extracellular matrices to obtain suspension of the extracellular matrices;
- concentrating the suspension; and
- combining the extracellular matrices in the concentrated suspension with another base made of titanium or a titanium alloy.

1 10. An extracellular-matrix preparation for injection which is  
2 prepared from extracellular matrices formed by cells of a region of an or-  
3 ganism, into which the preparation is to be injected, by concentrating and  
4 processing the extracellular matrices.

1 11. An extracellular-matrix ointment which is prepared from  
2 concentrated fluid of extracellular matrices formed by cells of a region of  
3 an organism, to which the ointment is to be applied, and an ointment base.

1 12. A production method of an extracellular-matrix prepara-  
2 tion for injection comprising the steps of:

3 culturing cells of a region of an organism, into which the  
4 preparation is to be injected, on a base of titanium or a titanium alloy in a  
5 culture solution to form extracellular matrices between a calcification  
6 layer formed on the base and the cells;

7 removing the cells;

8 decalcifying the base with the calcification layer and the ex-  
9 tracellular matrices to obtain suspension of the extracellular matrices;

10 concentrating the suspension by dialysis;

11 sterilizing the concentrated suspension; and

12 preparing the preparation for injection from the concentrated  
13 suspension.

1 13. A production method of an extracellular-matrix ointment  
2 comprising the steps of:

3 culturing cells of a region of an organism, to which the oint-  
4 ment is to be applied, on a base of titanium or a titanium alloy in a culture  
5 solution to form extracellular matrices between a calcification layer  
6 formed on the base and the cells;

7 removing the cells;

8 decalcifying the base with the calcification layer and the ex-

- 9    tracellular matrices to obtain suspension of the extracellular matrices;  
10                   concentrating the suspension; and  
11                   adding an ointment base to the concentrated suspension to  
12   prepare the ointment from the concentrated suspension.

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